PHILIPS

Coding and Medicare national payment guide

2018

Lead extraction and cardiac rhythm management

All coding, coverage, billing and payment information provided herein by Philips is gathered from third-party sources and is subject to change. The information is intended to serve as a general reference guide and does not constitute reimbursement or legal advice. For all coding, coverage and reimbursement matters or questions about the information contained in this material, Philips recommends that you consult with your payers, certified coders, reimbursement specialists and/or legal counsel. Philips does not guarantee that the use of any particular codes will result in coverage or payment at any specific level. Coverage for these procedures may vary by Payer. Philips recommends that providers verify coverage prior to date of service. This information may include some codes for procedures for which Philips currently offers no cleared or approved products. In those instances, such codes have been included solely in the interest of providing users with comprehensive coding information and are not intended to promote the use of any products. The selection of a code must reflect the procedure(s) documented in the medical record. Providers are responsible for determining medical necessity, the proper place of service, and for submitting accurate claims. Payment amounts set forth herein are 2018 Medicare national averages; local Medicare payment amounts and private payer rates will vary.

1 Hospital inpatient

Hospitals are reimbursed by Medicare for inpatient procedures and services under the FY2018 Inpatient Prospective Payment System (IPPS), which utilizes the Medicare Severity Diagnosis Related Group (MS-DRG) system.

1.1 Hospital inpatient diagnosis codes

Not an all-inclusive list. Refer to ICD-10-CM 2018: The Complete Official Codebook for additional codes. Depending on procedure performed, multiple codes may be reported.

ICD-10-CM[1]	Descriptor
I44.4	Left anterior fascicular block
I44.5	Left posterior fascicular block
I44.60	Unspecified fascicular block
I44.69	Other fascicular block
I44.7	Left bundle-branch block, unspecified
I45.0	Right fascicular block
I45.10	Unspecified right bundle-branch block
I45.19	Other right bundle-branch block
I45.2	Bifascicular block
I45.3	Trifascicular block
I50.1	Left ventricular failure, unspecified
I50.20	Unspecified systolic (congestive) heart failure
I50.21	Acute systolic (congestive) heart failure
I50.22	Chronic systolic (congestive) heart failure
I50.23	Acute on chronic systolic (congestive) heart failure
I50.30	Unspecified diastolic (congestive) heart failure
I50.31	Acute diastolic (congestive) heart failure
I50.32	Chronic diastolic (congestive) heart failure
I50.33	Acute on chronic diastolic (congestive) heart failure
I50.40	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure
I50.41	Acute combined systolic (congestive) and diastolic (congestive) heart failure
I50.42	Chronic combined systolic (congestive) and diastolic (congestive) heart failure
I50.43	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure
I50.810	Right heart failure, unspecified
I50.811	Acute right heart failure
I50.812	Chronic right heart failure
I50.813	Acute on chronic right heart failure

continued from **1.1 Hospital inpatient diagnosis codes**

ICD-10-CM[1]	Descriptor
I50.814	Right heart failure due to left heart failure
I50.82	Biventricular heart failure
I50.83	High output heart failure
I50.84	End stage heart failure
I50.89	Other heart failure
I50.9	Heart failure, unspecified
I97.622	Postprocedural seroma of a circulatory system organ or structure following other procedure
I97.648	Postprocedural seroma of a circulatory system organ or structure following other circulatory system procedure
I11.0	Hypertensive heart disease with heart failure
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease
I21.01	ST elevation (STEMI) myocardial infarction involving left main coronary artery
I21.02	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery
I21.09	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall
I21.11	ST elevation (STEMI) myocardial infarction involving right coronary artery
I21.19	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall
I21.21	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery
I21.29	ST elevation (STEMI) myocardial infarction involving other sites
I21.3	ST elevation (STEMI) myocardial infarction of unspecified site
I21.4	Non-ST elevation (NSTEMI) myocardial infarction
I21.9	Acute myocardial infarction, unspecified
I21.A1	Myocardial infarction type 2
I21.A9	Other myocardial infarction type
I22.0	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall
I22.1	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall
I22.2	Subsequent non-ST elevation (NSTEMI) myocardial infarction
I22.8	Subsequent ST elevation (STEMI) myocardial infarction of other sites
I22.9	Subsequent ST elevation (STEMI) myocardial infarction of unspecified site
I25.10	Atherosclerotic heart disease of native coronary artery without angina pectoris
I25.110	Atherosclerotic heart disease of native coronary artery with unstable angina pectoris

ICD-10-CM[1]	Descriptor
I25.111	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm
I25.118	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris
I25.119	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris
I25.2	Old myocardial infarction
I25.5	Ischemic cardiomyopathy
I25.6	Silent myocardial ischemia
I25.89	Other forms of chronic ischemic heart disease
I25.9	Chronic ischemic heart disease, unspecified
I42.0	Dilated cardiomyopathy
I42.3	Endomyocardial (eosinophilic) disease
I42.5	Other restrictive cardiomyopathy
I42.7	Cardiomyopathy due to drug and external agent
I42.8	Other cardiomyopathies
I42.9	Cardiomyopathy, unspecified
I43	Cardiomyopathy in diseases classified elsewhere
I44.0	Atrioventricular block, first degree
I44.1	Atrioventricular block, second degree
I44.2	Atrioventricular block, complete
I44.30	Unspecified atrioventricular block
I45.5	Other specified heart block
I45.6	Pre-excitation syndrome
I45.81	Long QT syndrome
I45.89	Other specified conduction disorders
I45.9	Conduction disorder, unspecified
I46.2	Cardiac arrest due to underlying cardiac condition
I46.8	Cardiac arrest due to other underlying condition
I46.9	Cardiac arrest, cause unspecified
I47.0	Re-entry ventricular arrhythmia
I47.1	Supraventricular tachycardia
I47.2	Ventricular tachycardia
I47.9	Paroxysmal tachycardia, unspecified

ICD-10-CM[1]	Descriptor
I48.0	Paroxysmal atrial fibrillation
I48.1	Persistent atrial fibrillation
I48.2	Chronic atrial fibrillation
I48.3	Typical atrial flutter
I48.4	Atypical atrial flutter
I48.91	Unspecified atrial fibrillation
I48.92	Unspecified atrial flutter
I49.01	Ventricular fibrillation
I49.02	Ventricular flutter
I49.2	Junctional premature depolarization
I49.5	Sick sinus syndrome
I49.9	Cardiac arrhythmia, unspecified
I50.1	Left ventricular failure, unspecified
I50.20	Unspecified systolic (congestive) heart failure
I50.21	Acute systolic (congestive) heart failure
I50.22	Chronic systolic (congestive) heart failure
I50.23	Acute on chronic systolic (congestive) heart failure
I50.30	Unspecified diastolic (congestive) heart failure
I50.31	Acute diastolic (congestive) heart failure
I50.32	Chronic diastolic (congestive) heart failure
I50.33	Acute on chronic diastolic (congestive) heart failure
I50.40	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure
I50.41	Acute combined systolic (congestive) and diastolic (congestive) heart failure
I50.42	Chronic combined systolic (congestive) and diastolic (congestive) heart failure
I50.43	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure
I50.810	Right heart failure, unspecified
I50.811	Acute right heart failure
I50.812	Chronic right heart failure
I50.813	Acute on chronic right heart failure
I50.814	Right heart failure due to left heart failure
I50.82	Biventricular heart failure

continued from **1.1 Hospital inpatient diagnosis codes**

ICD-10-CM[1]	Descriptor
I50.83	High output heart failure
I50.84	End stage heart failure
I50.89	Other heart failure
I50.9	Heart failure, unspecified
I97.622	Postprocedural seroma of a circulatory system organ or structure following other procedure
I97.648	Postprocedural seroma of a circulatory system organ or structure following other circulatory system procedure
R00.1	Bradycardia, unspecified
T82.111A	Breakdown (mechanical) of cardiac pulse generator (battery), initial encounter
T82.121A	Displacement of cardiac pulse generator (battery), initial encounter
T82.191A	Other mechanical complication of cardiac pulse generator (battery), initial encounter
T82.7XXA	Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts, initial encounter
T82.817A	Embolism due to cardiac prosthetic devices, implants and grafts, initial encounter
T82.827A	Fibrosis due to cardiac prosthetic devices, implants and grafts, initial encounter
T82.837A	Hemorrhage due to cardiac prosthetic devices, implants and grafts, initial encounter
T82.847A	Pain due to cardiac prosthetic devices, implants and grafts, initial encounter
T82.857A	Stenosis of other cardiac prosthetic devices, implants and grafts, initial encounter
T82.867A	Thrombosis due to cardiac prosthetic devices, implants and grafts, initial encounter
T82.897A	Other specified complication of cardiac prosthetic devices, implants and grafts, initial encounter
T82.9XXA	Unspecified complication of cardiac and vascular prosthetic device, implant and graft, initial encounter
Z45.018	Encounter for adjustment and management of other part of cardiac pacemaker

1.2 Hospital inpatient procedure codes

Not an all-inclusive list. Refer to ICD-10-PCS 2018: The Complete Official Codebook for additional codes. Depending on procedure performed, multiple codes may be reported.

ICD-10-PCS[2]	Descriptor
Lead extraction	
02PA0MZ	Removal of Cardiac Lead from Heart, Open Approach
02PA3MZ	Removal of Cardiac Lead from Heart, Percutaneous Approach
02PA4MZ	Removal of Cardiac Lead from Heart, Percutaneous Endoscopic Approach
Cardiac rhythm management	
0JH637Z	Insertion Cardiac Resynchronization Pacemaker Pulse Generator in Chest Subcutaneous/Fascia, Perc
0JH837Z	Insertion Cardiac Resynchronization Pacemaker Pulse Generator in Abdomen Subcutaneous/Fascia, Perc
02HK3JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach
02HK4JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach
02HL3JZ	Insertion of Pacemaker Lead into Left Ventricle, Percutaneous Approach
02HL4JZ	Insertion of Pacemaker Lead into Left Ventricle, Percutaneous Endoscopic Approach
02H63JZ	Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach
02H64JZ	Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach
02H43JZ	Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Approach
02H44JZ	Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Endoscopic Approach
0JH639Z	Insertion Cardiac Resynchronization Defibrillator Pulse Generator in Chest Subcutaneous/Fascia, Perc
0JH839Z	Insertion Cardiac Resynchronization Defibrillator Pulse Generator in Abdomen Subcutaneous/Fascia, Perc
02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
02HL3KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Approach
02HL4KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Endoscopic Approach
02H63KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Approach
02H64KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Endoscopic Approach
02H43KZ	Insertion of Defibrillator Lead into Coronary Vein, Percutaneous Approach
02H44KZ	Insertion of Defibrillator Lead into Coronary Vein, Percutaneous Endoscopic Approach
02H43JZ	Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Approach
02H43KZ	Insertion of Defibrillator Lead into Coronary Vein, Percutaneous Approach
02H43MZ	Insertion of Cardiac Lead into Coronary Vein, Percutaneous Approach
02HK3MA	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach
02H63MA	Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach

continued from **1.2 Hospital inpatient procedure codes**

ICD-10-PCS[2]	Descriptor
0JH637Z	Insertion Cardiac Resynchronization Pacemaker Pulse Generator in Chest Subcutaneous/Fascia, Perc
0JPT3PZ	Removal Cardiac Rhythm Device from Trunk Subcutaneous/Fascia, Percutaneous
0JH639Z	Insertion Cardiac Resynchronization Defibrillator Pulse Generator in Chest Subcutaneous/ Fascia, Perc
0JPT3PZ	Removal Cardiac Rhythm Device from Trunk Subcutaneous/Fascia, Percutaneous

1.3 FY2018 Hospital inpatient diagnosis related groups (MS-DRG)

For peripheral arterial primary interventional procedures; assignment varies based on patient condition.

DRG	Descriptor	Payment[3]
Lead extraction		
260	Cardiac pacemaker revision except device replacement w/ MCC[4]	**$21,620**
261	Cardiac pacemaker revision except device replacement w/ CC[5]	**$11,680**
262	Cardiac pacemaker revision except device replacement w/o CC/MCC	**$9,950**
265	AICD lead procedures	**$20,115**
Cardiac rhythm management		
222	Cardiac defib implant w/ cardiac cath w/ AMI/HF/shock w/ MCC	**$51,136**
223	Cardiac defib implant w/ cardiac cath w/ AMI/HF/shock w/o MCC	**$38,823**
224	Cardiac defib implant w/o cardiac cath w/ AMI/HF/shock w/ MCC	**$44,241**
225	Cardiac defib implant w/o cardiac cath w/ AMI/HF/shock w/o MCC	**$34,117**
226	Cardiac defib implant w/o cardiac cath w/ MCC	**$40,964**
227	Cardiac defib implant w/o cardiac cath w/o MCC	**$32,573**
242	Permanent cardiac pacemaker implant w/ MCC	**$22,331**
243	Permanent cardiac pacemaker implant w/ CC	**$15,722**
244	Permanent cardiac pacemaker implant w/o CC/MCC	**$12,894**
258	Cardiac pacemaker device replacement w/ MCC	**$18,570**
259	Cardiac pacemaker device replacement w/o MCC	**$12,577**

2 Hospital outpatient and ambulatory surgery center

Hospitals are reimbursed by Medicare for outpatient procedures and services under the Outpatient Prospective Payment System (OPPS), which utilizes the CY2018 Ambulatory Payment Classification (APC) system. Ambulatory Surgery Centers are reimbursed based on a percentage of the OPPS Payment Rates.

2.1 Hospital outpatient and ASC procedure codes

		Outpatient hospital[6]		ASC[6]
CPT code[7]	Descriptor	APC/Status indicator[8]	Payment	Payment
Lead extraction				
33234	Removal of transvenous pacemaker electrodes; single lead system, atrial or ventricular	**5221/T Q2**	**$2,868**	**$1,494**
33235	Removal of transvenous pacemaker electrode(s), dual lead system	**5221/T Q2**	**$2,868**	**$1,494**
33244	Removal of single or dual chamber pacing cardioverter defibr electrode(s); by transvenous extraction	**5221/T Q2**	**$2,868**	**Not covered**
33999	Unlisted procedure, cardiac surgery (there is no specific code for LV lead removal or for the removal of more than two leads)	**5181/T**	**$613**	**Not covered**
Lead/cardiac rhythm management				
33207	Insertion of new or replacement of perm pacemaker with transvenous electrode(s); ventricular	**5223/J1**	**$9,748**	**$7,832**
33208	Insertion of new or replacement of perm pacemaker with transvns electrode(s); atrial and ventricular	**5223/J1**	**$9,748**	**$8,011**
33216	Insertion of a single transvns electrode, perm pacemaker or cardioverter-defibrillator	**5222/ J1 Q2**	**$7,371**	**$3,721**
33217	Insertion of 2 transvenous electrodes, permanent pacemaker or implantable defibrillator	**5222/ J1 Q2**	**$7,371**	**$5,755**
33218	Repair of single transvenous electrode for a single chamber, PPM or single chamber pacing cardioverter-defibrillator	**5221/ T Q2**	**$2,868**	**$1,494**
33223	Relocation of skin pocket for cardioverter-defibrillator	**5054/T**	**$1,568**	**$817**
33224	Insertion of pacing electrode, cardiac venous system, for LV pacing, with attachment to previously placed pacemaker or pacing cardioverter-defibrillator pulse generator (including revision of pocket, removal, insertion and/or replacement of generator)	**5223/J1**	**$9,748**	**$7,869**
+33225	Insertion of pacing electrode for LV pacing, at time of insertion of pacing cardio-defibr or pacemaker pulse generator (inc upgrade to dual chamber system and pocket revision)	**N**	**Pkgd**	**$0**
33233	Removal of permanent pacemaker pulse generator only	**5222/ J1 Q2**	**$7,371**	**$3,721**
33241	Removal of pacing cardioverter-defibrillator pulse generator only	**5221/ T Q2**	**$2,868**	**$1,494**
33249	Insertion or replacement of perm pacing cardio-defib system w transv lead(s), single or dual chamber	**5232/J1**	**$30,962**	**$27,340**

continued from **2.1 Hospital outpatient and ASC procedure codes**

		Outpatient hospital[6]		ASC[6]
CPT code[7]	Descriptor	APC/Status indicator[8]	Payment	Payment
Deployment of Bridge balloon occlusion catheter				
37244	Vascular embolization or occlusion, incl of all radiological S&I, intraprocedural roadmapping, & imaging guidance; for arterial or venous hemorrhage or lymph extravasation	**5193 / J1**	**$10,510**	**Not covered**

2.2 HCPCS supply code

In the outpatient setting, when devices are used in combination with device-related procedures, hospitals report C codes. While the supply codes are not paid separately from the procedure, the assignment of charges and reporting these supply codes, identify device-related costs. This information is important for future rate-setting by Medicare. Private payers' policies vary if they accept the use of these C codes.

HCPCS code	Descriptor	Device name	APC/Status indicator[6]	Payment
C1773	Retrieval device, insertable	• LLD (Lead Locking Device) • TightRail • SightRail dilator sheath set	**N**	**Pkgd**
C1893	Introducer/sheath, guiding, intracardiac electrophysiological, fixed-curve, other than peel-away	VisiSheath	**N**	**Pkgd**
C1769 **C1894**	Guide wire AND Introducer/sheath, other than guiding, other than intracardiac electrophysiological, non-laser	Bridge prep kit	**N**	**Pkgd**
C2628	Catheter, occlusion	Bridge balloon occlusion catheter	**N**	**Pkgd**
C2629	Introducer/sheath, other than guiding, intracardiac electrophysiological, laser	• GlideLight • SLS II laser sheath	**N**	**Pkgd**

3 Physician

Physician services are paid by Medicare based on the CY2018 Physician Fee Schedule.

3.1 Physician procedure codes – inpatient, outpatient (not payable in physician office setting)

		Physician (facility)[9]		
CPT code[7]	Descriptor	Payment[10]	Work RVU[11]	Total RVU[11]
Lead extraction				
33234	Removal of transvenous pacemaker electrodes; single lead system, atrial or ventricular	**$507**	**7.66**	**14.08**
33235	Removal of transvenous pacemaker electrode(s), dual lead system	**$667**	**9.90**	**18.52**
33244	Removal of single or dual chamber pacing cardioverter defibr electrode(s); by transvenous extraction	**$900**	**13.74**	**24.99**
33999	Unlisted procedure, cardiac surgery (there is no specific code for LV lead removal or for the removal of more than two leads)	**No payment assigned; TBD by payer**		
Lead/cardiac rhythm management				
33207	Insertion of new or replacement of perm pacemaker with transvenous electrode(s); ventricular	**$503**	**7.80**	**13.97**
33208	Insertion of new or replacement of perm pacemaker with transvns electrode(s); atrial and ventricular	**$545**	**8.52**	**15.13**
33216	Insertion of a single transvns electrode, perm pacemaker or cardioverter-defibrillator	**$387**	**5.62**	**10.75**
33217	Insertion of 2 transv electrodes, perm pacemaker or implantable defibrillator	**$380**	**5.59**	**10.56**
33218	Repair of single transvenous electrode for a single chamber, PPM or single chamber pacing cardioverter-defibrillator	**$405**	**5.82**	**11.26**
33223	Relocation of skin pocket for cardioverter-defibrillator	**$427**	**6.30**	**11.86**
33224	Insertion of pacing electrode, cardiac venous system, for LV pacing, with attachment to previously placed pacemaker or pacing cardioverter-defibrillator pulse generator (including revision of pocket, removal, insertion and/or replacement of generator)	**$540**	**9.04**	**14.99**
+33225	Insertion of pacing electrode for LV pacing, at time of insertion of pacing cardio-defibr or pacemaker pulse generator (inc upgrade to dual chamber system and pocket revision)	**$492**	**8.33**	**13.67**
33233	Removal of permanent pacemaker pulse generator only	**$240**	**3.14**	**6.67**
33241	Removal of pacing cardioverter-defibrillator pulse generator only	**$225**	**3.04**	**6.25**
33249	Insertion or replacement of perm pacing cardio-defib system w transv lead(s), single or dual chamber	**$959**	**14.92**	**26.63**
Deployment of Bridge balloon occlusion catheter				
37244	Vascular embolization or occlusion, incl of all radiological S&I, intraprocedural roadmapping, & imaging guidance; for arterial or venous hemorrhage or lymph extravasation	**$697**	**13.75**	**19.37**

4 Moderate sedation

Also known as conscious sedation.

Effective January 1, 2017

Moderate sedation was removed from all procedural services it was previously inherently included. CPT codes have been revised to reflect the removal of the moderate sedation CPT symbol indicating which procedure included moderate sedation. Moderate sedation is now separately billed using the new moderate sedation codes. Six new CPT codes CPT 99151-99157 were created. Providers should report the appropriate moderate sedation code(s) in addition to the procedure CPT codes when moderate sedation is performed. For further coding instructions, please refer to the coding guidelines and moderate sedation table in 2018 CPT Professional.

5 Sample scenarios for lead extraction[3,6,8,9,10,11]

These payments amounts are illustrative only, and a different coding and payment scenarios may be applied based upon the individual patient's circumstances. Coding will vary based on medical necessity and procedures performed and documented in the patient's medical record.

5.1 Failed lead with removal

Lead removal only

Scenario: pacer lead failed, replaced with extraction

Pacemaker (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
262	Cardiac pacemaker revision except device replacement w/o CC/MCC	**$9,950**

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33234	Removal of trans pacemaker electrode(s); single lead system, atrial or ventricular	**5221/Q2**	**Pkgd**
33216	Insertion of a single transvns electrode, perm pacemaker or cardio-defib	**5222/J1**	**$7,371**
	Hospital outpatient total		**$7,371**

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33234	Removal of transvns pacemaker electrode(s); single lead system, atrial or ventricular	**$507**	**7.66**	**14.08**
33216-51	Insertion of a single transvns electrode, perm pacemaker or cardio-defibrillator	**$194**	**2.81**	**5.38**
	Physician total	**$701**	**10.47**	**19.46**

continued from **5.1 Failed lead with removal**

ICD (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
265	AICD lead procedures	**$20,115**

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33244	Removal of single or dual chmbr pacing cardio-defibr electrode(s); transvns extractn	**5221/T Q2**	**Pkgd**
33216	Insertion of a single transvns electrode, perm pacemaker or cardio-defibrillator	**5222/J1 Q2**	**$7,371**
	Hospital outpatient total		**$7,371**

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33244	Remvl of sngl or dual chmbr pacing cardio-defibr electrode(s); transvns extraction	**$900**	**13.74**	**24.99**
33216-51	Insertion of a single transvns electrode, perm pacemaker or cardio-defibrillator	**$194**	**2.81**	**5.38**
	Physician total	**$1,094**	**16.55**	**30.37**

Lead and system removal and replacement

Scenario: lead replacement, failed lead (extraction) + device replacement near end of life but not at end of life

Pacemaker (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
259	Cardiac pacemaker device replacement w/o MCC	**$12,577**

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33235	Removal of transvenous pacemaker electrode(s); dual lead system	**5221/T Q2**	**Pkgd**
33208	Insrtn of new or rplcmnt of perm pacemkr w transvns electrode(s); atrial and vntrclr	**5223/J1**	**$9,748**
33233	Removal of permanent pacemaker pulse generator only	**5222/J1 Q2**	**Pkgd**
	Hospital outpatient total		**$9,748**

continued from **5.1 Failed lead with removal**

Pacemaker (possible payment scenarios):

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33235	Removal of trans pacemaker electrode(s); dual lead system	**$667**	**9.90**	**18.52**
33208 -51	Insertion of new or rplcmnt of perm pacemkr w transvns electrode(s); atrial and vntrclr	**$273**	**4.26**	**7.57**
33233 -51	Removal of permanent pacemaker pulse generator only	**$120**	**1.57**	**3.34**
	Physician total	**$1,060**	**15.73**	**29.42**

ICD (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
227	Cardiac defib implant w/o cardiac cath w/o MCC	**$32,573**

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33249	Insertion or replacement of perm pacing cardioverter-defib system w transv lead(s), single or dual chamber	**5232/J1**	**$30,962**
33244	Remvl of sngl or dual chmbr pacing cardio-defibr electrode(s); transvns extractn	**5221/T Q2**	**Pkgd**
33241	Removal of pacing cardioverter-defibrillator pulse generator only	**5221/T Q2**	**Pkgd**
		Hospital outpatient total	**$30,962**

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33249	Insertion or replacement of perm pacing cardioverter-defib system w transv lead(s), single or dual chamber	**$959**	**14.92**	**26.63**
33244-51	Removal of single or dual chmbr pacing cardio-defib electrode(s); transvenous extraction	**$450**	**6.87**	**12.50**
33241-51	Removal of pacing cardioverter-defibrillator pulse generator only	**$113**	**1.52**	**3.13**
	Physician Total	**$1,522**	**23.31**	**42.25**

5.2 Change out or upgrade of cardiac rhythm management device with lead removal

Change out with lead removal

Scenario: pacer upgrade to CRT-D with failed lead, extraction of lead

Pacemaker (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
227	Cardiac defib implant w/o cardiac cath w/o MCC	**$32,573**

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33225	Insrtn of LV pacing electrode, at time of insrtn of generator	**N**	**$0**
33249	Insrtn/replcmt of perm pacing ICD sys w transv lead(s), singl/dual chmbr	**5232/J1**	**$30,962**
33233	Removal of permanent pacemaker pulse generator only	**5222/J1 Q2**	**Pkgd**
33235	Removal of transvenous pacemaker electrode(s); dual lead system	**5221/T Q2**	**Pkgd**
	Hospital outpatient total		**$30,962**

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
+33225	Insrtn of LV pacing electrode, at time of insrtn of generator	**$492**	**8.33**	**13.67**
33249	Insertion/replacement of perm pacing ICD sys w transv lead(s), single/dual chamber	**$959**	**14.92**	**26.63**
33233-51	Removal of permanent pacemaker pulse generator only	**$120**	**1.57**	**3.34**
33235-51	Removal of trans pacemaker electrode(s); dual lead system	**$334**	**4.95**	**9.26**
	Physician total	**$1,905**	**29.77**	**52.90**

Scenario: patient presents for single or dual chamber ICD change out with a lead is on the FDA recall list

ICD (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
226	Cardiac defib implant w/o cardiac cath w/ MCC	**$40,964**

continued from **5.2 Change out or upgrade of cardiac rhythm management device with lead removal**

ICD (possible payment scenarios):

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33249	Insertion or replacement of perm pacing cardioverter-defib system w transv lead(s), single or dual chamber	**5232/J1**	**$30,962**
33244	Removal of single or dual chamber pacing cardio-defibr electrode(s); transvns extraction	**5221/T Q2**	**Pkgd**
33241	Removal of pacing cardioverter-defibrillator pulse generator only	**5221/T Q2**	**Pkgd**
	Hospital outpatient total		**$30,962**

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33249	Insertion or replacement of perm pacing cardioverter-defib system w transv lead(s), single or dual chamber	**$959**	**14.92**	**26.63**
33244-51	Removal of single or dual chmbr pacing cardio-defib electrode(s); transvenous extraction	**$450**	**6.87**	**12.50**
33241-51	Removal of pacing cardioverter-defibrillator pulse generator only	**$113**	**1.52**	**3.13**
	Physician Total	**$1,522**	**23.31**	**42.25**

5.3 Infection

System removal and reimplant during the same hospital stay

Scenario: infected dual chamber PM, extraction and reimplant at a later time during same hospitalization

Pacemaker (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
259	Cardiac pacemaker device replacement w/o MCC	**$12,577**

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33235	Removal of transvenous pacemaker electrode(s), dual lead system	**5221/T Q2**	**Pkgd**
33233	Removal of permanent pacemaker pulse generator only	**5222/Q2**	**Pkgd**
33208	Insertion of new or replacement of PPM w transvns electrode(s); atrial and ventricular	**5223/J1**	**$9,748**
	Hospital outpatient total		**$9,748**

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33235	Removal of transvenous pacemaker electrode(s), dual lead system	**$667**	**9.90**	**18.52**
33233-51	Removal of permanent pacemaker pulse generator only ***Return to Cath Lab (planned reimplant)***	**$120**	**1.57**	**3.34**
33208-58	Insertion of new or replacmnt of perm PM with transvns electrode(s); atrial and ventr	**$545**	**8.52**	**15.13**
	Physician total	**$1,332**	**19.99**	**36.99**

Scenario: PT presents with a single or dual ICD presents with staphylococcus aureus; decision is made to explant the system and reimplant with a new ICD system at the same session

ICD (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
226	Cardiac defib implant w/o cardiac cath w/MCC	**$40,964**

continued from **5.3 Infection**

ICD (possible payment scenarios):

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33249	Insertion or replacement of perm pacing cardioverter-defib system w transv lead(s), single or dual chamber	**5232/J1**	**$30,962**
33244	Removal of single or dual chamber pacing cardio-defibr electrode(s); transvns extraction	**5221/T Q2**	**Pkgd**
33241	Removal of pacing cardioverter-defibrillator pulse generator only	**5221/T Q2**	**Pkgd**
	Hospital outpatient total		**$30,962**

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33249	Insrtn or rplcmt perm pacing cardiodefib systm w transvns lead(s), sngl dual chmbr	**$959**	**14.92**	**26.63**
33244-51	Remvl of sngl or dual chmber pacing cardio-defibr electrodes; transvns extractn	**$450**	**6.87**	**12.50**
33241-51	Removal of pacing cardioverter-defibrillator pulse generator only	**$113**	**1.52**	**3.13**
	Physician total	**$1,522**	**23.31**	**42.25**

Cardiac rhythm management system removal only (reimplant at a later date)

Scenario: infected device, extraction, transfer to long term care facility, reimplant at a later date

Pacemaker (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
262	Cardiac pacemaker revision except device replacement w/o CC/MCC	**$9,950**

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33235	Removal of transvenous pacemaker electrode(s), dual lead system	**5221/ T Q2**	**Pkgd**
33233	Removal of permanent pacemaker pulse generator only	**5222/J1 Q2**	**$7,371**
	Hospital outpatient total		**$7,371**

continued from **5.3 Infection**

Pacemaker (possible payment scenarios):

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33235	Removal of transv pacemaker electrode(s), dual lead system	**$667**	**9.90**	**18.52**
33233-51	Removal of permanent pacemaker pulse generator only	**$120**	**1.57**	**3.34**
	Physician total	**$787**	**11.47**	**21.86**

ICD (possible payment scenarios):

Hospital inpatient

MS-DRG	DRG description	Payment
262	Cardiac pacemaker revision except device replacement w/o CC/MCC	**$9,950**

Hospital outpatient

CPT code	CPT description	APC/Status	Payment
33244	Removal of single or dual chamber pacing cardio-defib electrode(s); transvns extraction	**5221/T Q2**	**$2,868**
33241	Removal of pacing cardioverter-defibrillator pulse generator only	**5221/T Q2**	**$1,434**
	Hospital outpatient total		**$4,302**

Physician

CPT code	Description	Facility payment	Work RVU	Total RVU
33244	Remvl of sngl or dual chmber pacing cardio-defibr electrodes; transvns extractn	**$900**	**13.74**	**24.99**
33241-51	Removal of pacing cardioverter-defibrillator pulse generator only	**$113**	**1.52**	**3.13**
	Physician Total	**$1,013**	**15.26**	**28.12**

6 Physician coding scenarios for lead management and EP procedures[9,10,11,12]

These payments amounts are illustrative only, and a different coding and payment scenarios may be applied based upon the individual patient's circumstances. Coding will vary based on medical necessity and procedures performed and documented in the patient's medical record.

6.1 Bridge balloon occlusion catheter

		Medicare 2018 national average physician (facility) payment		
CPT code	Descriptor	Payment	Work RVU	Total RVU
Vascular embolization (with documented tear)/Bridge balloon occlusion catheter (code addl procedures performed)				
37244	Vascular embolization or occlusion, for arterial or venous hemorrhage	**$697**	**13.75**	**19.37**
Vascular embolization (w/out documented tear)/Bridge balloon occlusion catheter (code addl procedures performed)				
37244-52	Vascular embolization or occlusion, for arterial or venous hemorrhage	**Payment dependent on payer review. Documentation of med necessity required, which will trigger manual claim review**		

6.2 Lead management with a device procedure

		Medicare 2018 national average physician (facility) payment		
CPT code	Descriptor	Payment	Work RVU	Total RVU
RV & ICD change out				
33249	Insrtn/replcmnt of perm pacing ICD system with transv lead(s), single or dual	**$959**	**14.92**	**26.63**
33244-51	Removal of single or dual chamber pacing ICD electrode(s); transv extraction	**$450**	**6.87**	**12.50**
93641-26	EP eval of single or dual chamber pacing ICD leads inc defib threshold eval at time of initial implantation or replacement; with testing	**$327**	**5.67**	**9.09**
	Totals	**$1,736**	**27.46**	**48.22**
A or RV lead removal & upgrade to Bi-V ICD				
33249	Insrtn/replcmnt of perm pacing ICD system with transv lead(s), single or dual	**$959**	**14.92**	**26.63**
33225	Insrtn of pacing electrode, cardiac venous system, for LV pacing, at time of insertion of pacing ICD or PM pulse generator (incl upgrade, pocket revision)	**$492**	**8.33**	**13.67**
33244-51	Removal of single/dual chamber pacing ICD electrode(s); transv extr	**$450**	**6.87**	**12.50**
93641-26	EP eval of single or dual chamber pacing ICD leads inc defib threshold eval at time of initial implant or replcmnt; w testing of single or dual ICD pulse gen	**$327**	**5.67**	**9.09**

6.3 EP Studies

CPT code	Descriptor	Medicare 2018 national average physician (facility) payment		
		Payment	Work RVU	Total RVU
Comprehensive EP study				
93620-26	Comp EP eval incl insrtn and repositioning of multiple electrode catheters w induction or attempted induction of arrhythmia; w RA pacing/recording, RV pacing and recording, his bundle recording	**$657**	**11.32**	**18.26**
SVT ablation with EP study				
93653	Comp EP eval … w intracardiac catheter ablation of arrhythmogenic focus; w treatment of SVT by ablation of fast or slow AV pathway, accessory AV connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re-entry	**$876**	**14.75**	**24.33**
VT ablation with EP study				
93654	Comp EP eval … w induction or attempted induction of an arrhythmia w RA pacing/recording, RV pacing/recording and his bundle recording w intracardiac cath ablation of arrhythmogenic focus; w trtmt of VT or focus of V ectopy incl intracardiac EP 3d mapping, LV pacing and recording	**$1,173**	**19.75**	**32.59**
Atrial fibrial with EP study				
93656	Comp EP eval inc transseptal cath, insrtn and repositioning of mult electrode catheters w induction or attempted induction of arrhythmia inc LT or RT atrial pacing/recording, RV pacing/recording, and his bundle recording w intracardiac cath ablation of afib by pulmonary vein isolation	**$1,176**	**19.77**	**32.68**
93657	Addl linear or focal intracardiac catheter ablation of the left or right atrium for treatment of AF remaining after completion of pulm vein isolation	**$446**	**7.50**	**12.39**

Highlights

For complete guidance, refer to CPT Medicare and private payer edits and rules.

Lead extraction coding

- There is no code that specifically describes removal of a left ventricular (LV) lead, nor a specific code for the removal of more than two leads (multi lead system). Therefore, if the cardiovascular device system is not single or dual-lead, it may be appropriate to report code 33999, Unlisted procedure, cardiac surgery.
  - *When an unlisted code is used, the physician must attach an operative report as well as a statement identifying a comparable procedure in terms of skill, expertise and time. Since unlisted codes have no payment value assigned, identification of a comparable procedure will assist the payer in identifying an appropriate payment rate.*

- The lead extraction codes allow for any means of extraction (manual, mechanical, laser). CPT codes 33244 describes ICD lead removal (any method); 33235 describes lead removal, pacemaker (dual lead system) (any method); and 33234 describes lead removal, pacemaker (single lead) (any method).

Bridge balloon occlusion catheter

- The Bridge Balloon Occlusion Catheter is described using HCPCS C-code C2628 (catheter, occlusion).
- The BRIDGE Prep Kit is described using 2 HCPCS codes: C1769 (guidewire) and C1894 (introducer sheath).
- The procedure to deploy Bridge may be described using CPT code 37244 (vascular embolization or occlusion, for arterial or venous hemorrhage). This code is inclusive of all imaging, guidance, supervision and road mapping.
  - *If the Bridge Balloon is deployed, but there is no tear, Modifier -52 (reduced services) should be appended to CPT code 37244 (occlusion or embolization). Documentation of medical necessity must be included.*

Extended physician work and/or time (modifier -22)

- If the surgeon has a more complicated case than usual and/or spends an unusually long time extracting the leads, they may be able to receive additional payment if the documentation and procedure time supports the additional work.
  - *Each CPT code is comprised of 3 Relative Value Units (RVUs): 1) Physician Work; 2) Practice Expense; and 3) Malpractice Expense. The Physician Work RVU is based on procedural complexity and average intraoperative procedure time. When the service exceeds these normal ranges (more complicated, complex, or requiring significantly more time than usual), modifier -22 may be added to the procedure code.*

- While use of Modifier -22 may allow for additional payment, it always requires manual code review, which may slow down the claims processing time. Payers may consider allowing up to 25% above the contracted payment rate (depending on documentation submitted, provider contract, etc.).
  - *If use of modifier -22 is considered medically necessary, additional payment may be allowed but the amount will vary based on documentation and payer guidelines. Additional reimbursement may be considered only when the documentation submitted clearly states the exceptional nature of the service provided.*

- A good rule of thumb for billing the –22 modifier is that the physician work time should be at least 25% above the RVU allowable time. It is important to note that "Intraoperative time" does not include time for pre-evaluation, pre-positioning, pre-service scrub time or immediate post service time. The below table identifies the intraoperative work time for Lead Extraction and Insertion (Note: the time listed below is specific to intraoperative work only).[13]

		Work RVU	Allowed intraoperative time	Additional time for modifier-22 consideration	Total min procedure time for modifier -22 consideration
Lead extraction					
33234	Removal of transv PM electrodes; single lead	**7.66**	**150 minutes**	**37.5 minutes**	**187.5 minutes**
33235	Removal of transv PM electrode(s), dual	**9.90**	**170 minutes**	**42.5 minutes**	**212.5 minutes**
33244	Removal of pacing ICD electrode(s); transvns	**13.74**	**180 minutes**	**45 minutes**	**225 minutes**

		Work RVU	Allowed intraoperative time	Additional time for modifier-22 consideration	Total min procedure time for modifier -22 consideration
Lead insertion					
33207	Insertn/rplcmt of PPM with transelectrode(s); vent	**7.80**	**60 minutes**	**15 minutes**	**75 minutes**
33208	; atrial & vent	**8.52**	**60 minutes**	**15 minutes**	**75 minutes**
33216	Insertion of single electrode, PPM or cardio-defib	**5.62**	**90 minutes**	**23 minutes**	**113 minutes**

Co-surgeons (modifier -62)

- In certain cases, Medicare does allow payment for co-surgeons. The requirements include: 1) the physicians must be of different specialties; and 2) the Medicare Physician Fee Schedule must indicate "co-surgeon" is allowed. Payment is reduced to 62.5% for both surgeons.

If Medical Necessity has been established, co-surgeon is allowed for:
1) CPT 33207 (Insertion of PPM w electrode(s), ventric)
2) CPT 33208 (Insertion of PPM w electrode(s), atrial & ventric)

Medicare may allow co-surgeon based on medical necessity documentation for: 1) CPT 33244 (Removal of ICD electrode)
2) CPT 33249 (Insertion or replacement of ICD system w leads)

Billing Requirements: BOTH surgeons MUST submit the same CPT code WITH the -62 modifier in order to receive payment; and documentation must be submitted supporting the need for co-surgeon support.

Discontinued or incomplete procedure (modifier -53)

- Under certain circumstances, a physician may elect to terminate a surgical or diagnostic procedure due to extenuating circumstances, or those that threaten the well-being of the patient. Modifier -53 should be appended to the procedure that was not completed. Documentation will be required for consideration of payment.

Third-party sources

- 2018 CPT Professional Edition
- 2016 CPT Changes, An Insider's View
- 2017 CPT Changes, An Insider's View
- CPT Assistant
- 2018 ICD-10-CM and ICD-10-PCS: The Complete Official Codebook

---

1. Refer to ICD-10-CM 2018: The Complete Official Codebook for a complete list of diagnosis codes and specific character codes.
2. Refer to ICD-10-PCS 2018: The Complete Official Codebook for a complete list of procedure codes and specific character codes.
3. Medicare Inpatient Prospective Payment System 2018 Final Rule (CMS-1677-CN) Federal Register Vol 82 No. 191, October 4, 2017. Table 5 CN. Payment rates assume full update amount for hospitals which have submitted quality data and hospitals have a wage index greater than 1.
4. Major complications and comorbidities
5. Complications and comorbidities
6. Medicare Hospital Outpatient Prospective Payment and Ambulatory Surgical Center Payment Systems and Quality Reporting Programs. 2018 Final Rule (CMS-1678-CN), Published in the Federal Register December 14, 2017, OPPS Addendum B and ASC Addendas AA-EE.
7. CPT Copyright 2017 American Medical Association. All rights reserved. CPT® is a registered trademark of the American Medical Association. Applicable FARS/DFARS Restrictions Apply to Government Use. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.
8. Status J1: Comprehensive APC – accounts for all costs and component services typically involved in the provision of the complete primary procedure; Status N: No separate APC payment. Packaged into payment for other services; Status Q2: T-Packaged Codes - Packaged APC payment if billed on the same date of service as a HCPCS code assigned status indicator "T" or "J1". In other circumstances, payment is made through a separate APC payment.
9. Procedures performed in the facility setting (hospital or ASC) are reimbursed at the Medicare facility rate.
10. Medicare Physician Fee Schedule. Final Policy, Payment, and Quality Provisions in the Medicare Physician Fee Schedule for Calendar Year 2018, (CMS-1676-F), November 2, 2017. Federal Register Vol. 82, No. 219. Addendum B, 2018 conversion factor 35.9996.
11. RVU: Relative Value Units assigned under the Medicare Physician Fee Schedule, Addendum B. For each CPT code, RVUs are assigned to account for the relative resource costs used to provide the service.
12. Standard payment adjustment rules for multiple procedures apply. If procedure is reported on the same day as another procedure (with fee schedule indicator 1, 2, or 3) rank the procedures by fee schedule amount and apply the appropriate reduction to this code (100%, 50%, 50%, 50% and by report). Payment based on the lower of: (a) the actual charge or (b) the fee schedule amount reduced by the appropriate percentage. (Modifier -51)
13. CMS CY2108 PFS Final Rule Physician Time File; Available athttps://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Federal-Regulation-Notices-Items/CMS-1676-F.html?DLPage=1&DLEntries=10&DLSort=2&DLSortDir=descending

For further information about Philips and Spectranetics products, please visit www.philips.com/IGTdevices or www.spectranetics.com.

D000200911/A

Philips
3721 Valley Centre Drive, Suite 500
San Diego, CA 92130 USA
www.philips.com/IGTdevices